# Bean Beetle Egg Laying Preferences

Alexandra Laber, Wong Ka Yee, Alexander Vågenes, Jérôme Isle de Beauchaine

## **Research Questions**

- 1. Do the beetles have preference on laying egg on bean of where they emerged from?
- 2. Do the beetles have preference on bean type?

## **Methods**

- 1. Fill petri dish with 35 adzuki (AZ) beans on one side and 35 black-eyed pea (BEP) beans on the other side
- 2. Obtain beetles cultured from either BEP or AZ beans
- 3. Place beetles on either novel or natal side of beans in petri dish
  - 5 females, 1 male in each dish
  - 7 replicates of each group
- 4. Allow beetles to lay eggs for a week, then remove
- 5. Count the number of eggs on the beans



Figure 1: Petri dish setup. Beetles were placed on one side and number of eggs on each bean type counted

### Results



No preference on laying egg on bean that they

**Future Studies** 

- Success rate of egg on

## emerged from

- a. Limited adaptation for natal bean type
- 2. Egg ratio on black-eyed peas is higher than on adzuki
  - a. More resources
  - b. Larger surface area
  - c. Lay as much as possible?
  - d. Random choice?

**References**:

Beck, C. W., & Blumer, L. S. (2011). A handbook on bean beetles, Callosobruchus maculatus. National Science Foundation.

#### different bean types **Relationship of resources and** number of egg

